

Atty Docket No. JCLA12969

Serial No. 10/786,703

In The Specification:

Please amend the paragraph as indicated [0012] at page 4 as follows:

[0012] FIG. 2 is a cross-sectional view of an LDMOS transistor 100. The LDMOS transistor 100 includes a P-substrate 90. The LDMOS transistor 100 further includes a first diffusion region 33 and a second diffusion region 37 containing N conductivity-type ions to form an N-well 30 with an ion-doped concentration of $5E15/cm^3 \sim 5E16/cm^3$ in the P-substrate 90. The first diffusion region 33 further comprises an extended drain region 50 with an ion-doped concentration of $5E15/cm^3 \sim 5E16/cm^3$. A drain diffusion region 53 having N+ conductivity-type ions concentration of $5E19/cm^3 \sim 5E20/cm^3$ in the N-well 30 formed in the first diffusion region 33, develops a drain region 52 with a boundary ion-doped concentration of $5E15/cm^3 \sim 5E16/cm^3$ in the extended drain region 50. A third diffusion region containing P conductivity-type ions forms a P-field 60, divided P-fields 61 and 62 located in the extended drain region 50. The divided P-fields 61 and 62 are nearer to the drain region 52 than the P-field 60. A fourth diffusion region 67 containing P conductivity-type ions in the N-well 30 formed by the second diffusion region 37, develops an isolated P-well 65 for preventing from breakdown. Furthermore, it is well known in the semiconductor manufacturing field that after thermal diffusion of implanted ions, it can make a left edge of the first diffusion region 33 touch a right edge of the second diffusion region 37, which is the source-gap 72 having an ion-doped concentration of $5E14/cm^3 \sim 5E15/cm^3$. ~~The isolated P-well 65 encloses the source region 56 and the contact region 58.~~ A source diffusion region 55 having N+ conductivity-type ion[[s]] concentration of $5E19/cm^3 \sim 5E20/cm^3$ develops a source region 56 with a boundary ion-doped concentration of $1E16/cm^3 \sim 1E17/cm^3$ in the P well 65. A contact diffusion region 57 containing

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P+ conductivity-type ions concentration of $5E19/cm^3 \sim 5E20/cm^3$ in the N-well 30 formed by the second diffusion region 37, develops a contact region 58. The P-field 60, the divided P-fields 61 and 62 form junction-fields in the N-well 30 to deplete a drift region.